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# **WOMEN WORKERS IN THE HEALTHCARE SECTOR IN COLOMBIA**

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Work Document

2022/001



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2022/001



**Mpodera**  
Mujeres + Liderazgo + Salud

## **UNITED NATIONS DEVELOPMENT PROGRAMME, UNDP**

Sara Ferrer Olivella

**Resident Representative**

Alejandro Pacheco

**Deputy Resident Representative**

Javier Ignacio Pérez Burgos

**National Head of Poverty and Inequality Reduction Area**

Diana Lucía Rojas Sarmiento

**National Coordinator of Equipares Seal**

Laura Palacios Astorquiza

María Camila de la Hoz Moncaleano

**Technical Team, Poverty and Inequality Reduction Area**

María Camila de la Hoz Moncaleano

Ingrid Daniela Florián León

María Alejandra Lara

**Authors**

Lina María Montes Ramos

**Design and Layout**

## **MPODERA**

Diana Isabel Cárdenas Gamboa

**Consultant, former Deputy Health Minister and former Director of ADRES**

María Clara Angarita

**Global Oncology Policy Director, MSD**

Sandra Aramburo Arenas

**Global ERG (Employee Resource Group) Leader Gender+, Sanofi**

Sandra Cifuentes

**VP Marketing, Customer Excellence and Market Access International Markets, Astellas.**

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# **WOMEN WORKERS IN THE HEALTHCARE SECTOR IN COLOMBIA**

**Authors:**

**María Camila de la Hoz Moncaleano<sup>1</sup>**

**Ingrid Daniela Florián León<sup>2</sup>**

**María Alejandra Lara<sup>3</sup>**

## **ABSTRACT**

The healthcare sector is a highly feminized sector where women represent 71.0% of the global workforce and, for Colombia, this percentage rises to 80.3%, yet high wage gaps persist. This study presents an overview that accounts for the current state of the composition of the workforce in the healthcare sector in Colombia from a gender perspective, illustrating the composition of the sector by educational level, analyzing the wage gaps and working conditions of informality, linking it with gender roles and care tasks. In Colombia wage gaps between men and women prevail for all educational levels in the health sector, being larger at specialization levels.

Key words: Gender gaps, Healthcare Sector, Labor Market.

*JEL classification: J16, J31, J44*

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<sup>1</sup> Research Especialist, UNDP.

<sup>2</sup> UNDP Consultant.

<sup>3</sup> Mpodera Consultant.

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## **ACRONYMS**

<b>GEIH</b>	Large Integrated Household Survey
<b>HHT</b>	Human Healthcare Talent
<b>IBC</b>	Base Contribution Income
<b>PPE</b>	Personal Protective Equipment
<b>p.p.</b>	Percentage points
<b>SDGS</b>	Sustainable Development Goals
<b>ReTHUS</b>	Single National Registry of Human Talent in Healthcare
<b>UNDP</b>	United Nations Development Programme
<b>WHO</b>	World Health Organization

# 1. INTRODUCTION

Gender inequality has been a historical feature and a structural problem in Latin America and Colombia that can be observed at all levels of the public and private spheres. These inequalities are reflected in access to resources and opportunities, in the accumulation of human capital, in a significant feminization of poverty, in wage gaps between men and women for the same level of skills and training, in prejudices about what should be the role of women at home and in society, among many others. Although important efforts have been made at the national and international levels to close gender gaps, there are still important challenges at the national and regional levels to guarantee women's rights and promote progress towards their autonomy, laying the foundations for a society with equality and equity.

In the labor market, gender gaps also represent a structural problem: globally, women have a lower participation rate than men (47% compared to 72% for men) and face greater barriers to promotion and leadership positions (ILO, 2022). This is due, in part, to factors such as wage discrimination, occupational discrimination, formal and informal rules, and the sexual division of labor. This problem is generally and persistently observed in all economic sectors, manifesting itself in the form of vertical<sup>4</sup> and horizontal<sup>5</sup> segregation. Moreover, although occupational segregation often has negative implications for an economy, it appears to be resilient to economic growth, as it is similarly prevalent in developed and developing countries (Das & Kotikula, 2019).

In this context, and within the framework of the Sustainable Development Goals (SDGs) of the 2030 Agenda<sup>6</sup>, Goal 5 "Gender equality" highlights how essential it is to identify and make visible the gender gaps present in various contexts and economic sectors in order to propose and manage actions and public policies to move forward towards gender equality. The freedom to work, by choice, in conditions of dignity, security and equity, represents a comprehensive part of human well-being and development, so ensuring that women have access to this right is an important end (ILO, 2022).

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<sup>4</sup> Vertical segregation refers to the unequal concentration of women and men in positions of different ranks and responsibilities.

<sup>5</sup> Horizontal segregation refers to the unequal concentration of women and men in different sectors and occupations.

<sup>6</sup> In 2015, the United Nations General Assembly adopted the 2030 Agenda for Sustainable Development: an action plan for people, the planet and prosperity, which also aims to strengthen universal peace and access to justice. The Agenda sets out 17 Goals with 169 integrated and indivisible targets covering the economic, social, and environmental spheres.

To this end, Mpodera, a movement aimed at reducing gender gaps<sup>7</sup> and the United Nations Development Program (UNDP) have joined forces to undertake this research on gender inequalities, with emphasis on the healthcare sector in Colombia, and on the factors that trigger the gender inequities currently observed in this important sector.

The healthcare sector plays a fundamental role in determining the quality of life and capabilities of people in a society, as well as in promoting human development. For this reason, the SDGs include a goal that explicitly refers to healthcare (SDG 3), which emphasizes that universal healthcare coverage and access to healthcare services should be achieved by 2030, leaving no one behind. With this goal in mind, it is crucial to understand the internal dynamics of the healthcare sector in Colombia, its structure and composition, in order to identify and promote its potential, as well as to address aspects that may be generating inefficiencies and inequities, such as the gender gaps that prevail in the sector.

Women represent almost 70% of the healthcare and social services workforce worldwide (accounting for almost 90% of the nursing and obstetrics workforce) (WHO, 2021). However, it is estimated that they occupy only about 25% of leadership positions in healthcare (WHO, 2021). For Colombia, the percentage of women in the healthcare workforce is 80.3%<sup>8</sup>. As at the global level, in Colombia there is also a concentration of women in the sector in jobs with lower visibility and remuneration than men. This is largely due to gender stereotypes, structural barriers, formal and informal norms, and discrimination, which limit women's access to leadership in entities and organizations. The WHO Global Healthcare Workforce Gender Equity Network Hub recognizes that, of all healthcare and social staff, women are substantially underrepresented in management, leadership, and governance (Hub, 2018; WHO, 2019).

Because of the above, policy formulation and sectoral dynamics are highly influenced and determined by men, which in turn results in barriers to achieve SDG 3 as a significant proportion of female talent, ideas and knowledge is lost and cannot be part of decision making (WHO, 2019). This leadership gap in turn limits the reduction of inefficiencies, and the improvement of healthcare systems. In addition to the negative consequences for the sector, the gender gap is a problem, as it reflects the persistent structural barriers that prevent women from realizing their right to equality and equity.

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<sup>7</sup> Mpodera is a movement of leaders that seeks to empower women in the healthcare sector in Colombia. For more information, please visit <https://www.m-podera.org/>

<sup>8</sup> ReTHUS, data as of December 31, 2021.



In addition to the above, the COVID-19 pandemic reversed many of the labor gains achieved in closing gender gaps globally, as it increased the burden of care for children and the elderly, and household chores: analyses in this regard show a significant loss of jobs, especially in the most feminized sectors (World Economic Forum, 2021). In Colombia, employed women went from 9.2 million in 2019, to 6.7 million for the same period in 2020, which means that more than 2.5 million women lost their jobs during this period (27% of women compared to 18% of men) (DANE, 2020). This negative variation is also observed for the different branches of economic activity<sup>9</sup>, for which a negative variation in absolute female employment of 482,000 women (for a percentage variation of 28.5% compared to 14.1% for men)<sup>10</sup> is observed in the branch where the employed population of the healthcare sector is grouped: Public Administration and defense, education, and human healthcare (DANE, 2020).

In the regional context of Latin America, women in the health sector have had to face a series of difficult working conditions, including long working hours that add to the increased risk of contracting the virus - the design of most personal protective equipment (PPE), such as face masks, is based on men's bodies and not women's bodies, which puts female healthcare personnel at greater risk of infection; 90% of nursing personnel, who have direct and face-to-face roles with patients, are women (WGH, 2021). This is in addition to the persistent wage discrimination, where the labor income of women working in the healthcare sector is 23.7% lower than that of men in the same position (ECLAC, 2021).

The health crisis generated by COVID-19 has highlighted the need to put gender inequalities faced by women in the healthcare sector back on the table. The need has become clear for the country to quantitatively analyze the gender dynamics related to the healthcare workforce, to use it as an input for the formulation of public policies aimed at moving gender equality in the healthcare sector, leading to drive short and mid-term visible structural change, promoting and contributing to the growth of the sector, the fulfillment of the SDGs, and achieving equity and equality in and from its practices, projects, research, norms, and structure.

This document reports figures that provide an account of the dynamics of the healthcare sector in Colombia based on the use of different sources of information<sup>11</sup>. The characterization from a gender perspective investigates the

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<sup>9</sup> DANE classifies and groups the branches of economic activity of the employed population into 14 groups using ISIC 4 BC.

<sup>10</sup> For the April-June 2019-2020 quarter.

<sup>11</sup> Administrative data from the healthcare and education sectors, as well as information from DANE's Large Integrated Households Survey.

differences in the distribution of healthcare personnel throughout the national territory, and analyzes categories such as salary, education, employment, and tasks. The findings for Colombia are in line with the global dynamics of the sector and respond to the inherent phenomena of gender segregation described in the literature.

The rest of the document addresses the dynamics of the healthcare sector in Colombia from a gender perspective in five sections including this introduction. The second section develops the literature review, followed by the data and methodology section where the main sources of information and their use are presented. Subsequently, the results section addresses the most relevant features of the healthcare sector from a gender perspective with a regional approach of the composition of the Human Healthcare Talent (HHT), with special emphasis on the level of education, wage gaps, and caregiving tasks. Finally, conclusions are presented.

## 2. LITERATURE REVIEW

### 2.1 Health and human development

The concept and paradigm of development has constantly evolved, adopting different approaches and definitions over the years. The approach to development adopted by the United Nations is that of Human Development, which is based on Sen's (1999) analysis and consists of the idea that development is the process of expanding human freedoms and capabilities and opening up more options for people to chart their own development paths according to their values, rather than prescribing one or more particular paths (UNDP, 2020). In this sense, development takes place through empowering people to identify and follow their own paths to a meaningful life, anchored in expanded freedoms (Sen, 1999).

Under this conceptualization of Human Development, health emerges not only as an enabler of development<sup>12</sup>, but also as an end in itself: health equity as a fundamental aspect of social justice (Restrepo-Ochoa, 2013). According to the World Health Organization (WHO), equity in health is understood as the absence of unfair, avoidable or remediable differences in the health of different population groups defined socially, economically, demographically or geographically (WHO, 2022).

The concept of health, like that of development, is a concept that has been transformed over time. The WHO understands health as a state of complete physical, mental and social well-being, and not only as the absence of disease or illness (WHO, 2022). In this sense, health is understood to be interrelated with a series of relevant social variables, and is a crucial element that facilitates individual agency, in that it gives people the capabilities to live a life they value and allows them to be active agents of change in the development process (Ruger, 2003).

Because of the above, the SDGs include in one of their 17 goals, Goal 3: Health and Well-being. SDG 3 aims to prevent unnecessary suffering from preventable diseases and premature deaths by focusing on key factors<sup>13</sup> that can potentially improve the health of a country's overall population. Likewise, SDG3 calls for greater investments in research and development, health financing, and health risk reduction and management (UN, 2015).

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<sup>12</sup> It has been found that there is a close bidirectional relationship between health and economic development (Ruger, 2003).

<sup>13</sup> For example, reproductive, maternal, newborn, child, and adolescent health; communicable and non-communicable diseases; universal healthcare coverage; and access for all to safe, effective, quality and affordable medicines

Accordingly, the promotion and investment in healthcare, as well as the structure and operation of this sector is crucial to promote human development in societies and the fulfillment of the SDGs. To the extent that there are inefficiencies or inequities in healthcare and in the healthcare provider sector, there will be barriers to achieving inclusive and sustainable human development.

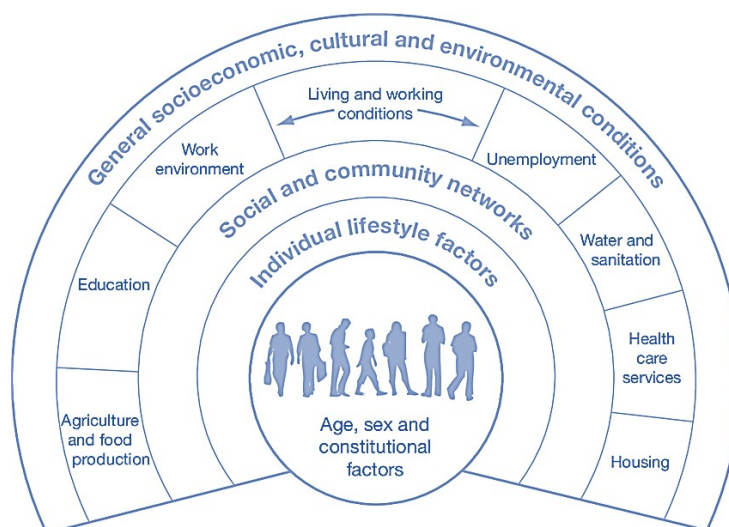
## **2.2. The social determinants of health**

Health, the supply of healthcare services and access to these services by individuals and a society are determined by various factors that go beyond biomedical factors, including social factors (income, welfare, justice, environment, education, social norms, customs, social policies, development agendas, etc.) (WHO, 2022; Dahlgren & Whitehead, 1991) (See Figure 1). The above indicates that health goes beyond individual behavior, genetic and biological attributes, and therefore it is necessary to focus also on the attributes that a community or a society has (Parry & Willis, 2019).

Dahlgren & Whitehead (1991) developed a model that seeks to explain how these social dimensions interact to determine the levels and indicators of health in a society. According to Figure 1, there are four layers of influence in the model: individual lifestyle factors followed by three layers of social determinants. The first layer (outer layer) includes socioeconomic, cultural, and environmental conditions; the second layer includes agriculture and food production, education, work environment, unemployment, sanitation and water supply, healthcare services and housing. The third includes social networks, which also have an impact on health outcomes. Finally, the fourth layer includes the individual determinants themselves and their behavior. This model suggests that the outer layers are characteristics of a society that determine the health of its members and that each layer shapes the next inner layer (Dahlgren & Whitehead, 1991; Parry & Willis, 2019).

Evidence has shown that social factors play a fundamental role in explaining a wide range of health indicators over and above medical advances, medical care, or people's lifestyles (Braveman & Gottlieb, 2014; WHO, 2022). In this sense, the importance of addressing the social determinants of health to move forward with the process of improving the overall health of a society and thus closing healthcare gaps and inequalities is evident.

Figure 1 Social Determinants of Health



Source: (Dahlgren & Whitehead, 1991)

For example, racial discrimination has been found to negatively affect the health outcomes of people of all socioeconomic levels by acting as a pervasive stressor in social interactions, even in the absence of conscious intent to discriminate (Paradies, 2006). In that sense, living in a society with a strong legacy of racial discrimination could negatively affect health through psychobiological pathways, even without the existence of overtly discriminatory incidents (Williams & Mohammed, 2009; Braveman & Gottlieb, 2014).

In general, the mechanisms through which social factors affect health outcomes and indicators are diverse, and there is ample evidence that studies and analyzes them (Braveman & Gottlieb, 2014). In this context, when searching for a policy or strategy that can address such determinants, a wide range of stakeholders within and outside the health sector and at all levels of government and civil society are encountered, representing a major public policy challenge to address the barriers to achieving health equity.

In the spirit to support countries and strategic partners in the process of addressing the social determinants of health, WHO established the Commission on Social Determinants of Health in March 2005. In 2008, the Commission published its final report<sup>14</sup>, which contained three major recommendations: (i) Improving daily living conditions, (ii) Addressing the unequal distribution of power, money, and resources, and (iii) Measuring and understanding the problem, as well as evaluating the action impact (WHO, Closing the gap in a generation: health equity

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<sup>14</sup> The report is entitled "Closing the gap in a generation: health equity through action".

through action on the social determinants of health (Commission on Social Determinants of Health final report, 2008). The report also includes a chapter on gender equity, which shows that the lack of gender equity is one of the social determinants of health and, to the extent that this inequality is not addressed, there will consequently be inequities in access to and enjoyment of health services and effects.

### **2.3 Gender inequality as a social determinant of health**

Gender equality, beyond being a fundamental human right, is also one of the necessary foundations for building a prosperous, peaceful, and sustainable society (UN, 2022). It is for this reason that the SDGs, in goal 5, aims to achieve gender equality and empower all women and girls.

According to UN Women (2022), gender equality...

[...] is based on the recognition that women have historically been discriminated against and that it is necessary to carry out actions to eliminate historical inequality and narrow the gaps between women and men in order to lay the foundations for effective gender equality, taking into account that the de facto inequality suffered by women can be aggravated by age, race, ethnicity, sexual orientation, socioeconomic status, among others. Substantive equality implies the modification of the circumstances that prevent people from fully exercising their rights and having access to development opportunities through structural, legal, or public policy measures.

In this context, gender equality has also been identified by the WHO as one of the social determinants of health (WHO, 2008), stating that the absence of this has serious implications on the results in health indicators and widening of gaps. Existing gender inequities in social and cultural norms, as well as the unequal participation of women in the labor market, are a structural determinant of health inequities (both for those who offer this service and those who receive it) (WHO, 2008; Miani, Wandschneider, Niemann, Batram-Zantvoort, & Razum, 2021).

The most vulnerable populations have significant challenges and barriers to accessing healthcare services, whether due to their income level, geographic location with respect to healthcare providers, the information available with respect to these services, and the levels of education that allow an individual to make informed decisions that would not negatively affect their well-being and that of their households. However, vulnerability in access to healthcare must be analyzed in an intersectional manner, as stereotypes and prejudices most often

affect women and girls, the elderly, people with disabilities, or are based on race, ethnicity or sexual identity. This results in these populations (and women in particular) being underrepresented in decision-making at all levels, receiving inferior and poorer quality services, and thus experiencing poorer health indicators in many cases (WHO, 2021).

Gender impacts health outcomes through differential exposure to intermediate determinants of health, i.e., material determinants (housing, neighborhood quality, consumption potential), psychosocial determinants (coping styles, stressors, relationships), and biological and behavioral factors (Miani, Wandschneider, Niemann, Batram-Zantvoort, & Razum, 2021). Gender, as well as the concepts it relates to such as masculinity, femininity, machismo, sexism, and heteronormativity, can have detrimental effects on health through different pathways, including differential exposure to risk, gendered behaviors, use of and access to healthcare services, and gender bias in healthcare systems (Miani, Wandschneider, Niemann, Batram-Zantvoort, & Razum, 2021; Heise, et al., 2019).

Gender inequality and the lack of a robust gender approach in healthcare sector activities, such as research or diagnostics, have important effects that not only widen gender gaps, but also reproduce and perpetuate them over time. According to WHO (2008), most health sciences research, as well as diagnostic processes, have to some degree gender biases, both in terms of what is studied and in terms of how the studies and diagnoses are carried out. Health problems that particularly affect women tend to be recognized and studied more slowly; some of women's health problems are dismissed as psychological (also in part because women's symptoms differ from men's for certain conditions), without including them as objects of research; the interaction between gender and other social factors are often not recognized; and sex-disaggregated data is often not collected, so that a significant part of contemporary knowledge about diseases and risk factors is constructed without considering the relevance of either sex or gender (Holdcroft, 2007; Hamberg, 2008; Criado- Perez, 2019; WHO, 2008; Iyer, Sen, & Östlin, 2008). This results in the under-diagnosis of many diseases presented by women and in the lack of adequate and relevant treatment.

Also, the shortage of women in positions of authority or influence may reduce the potential for scientific discovery, as women are more likely to develop and promote new programs and research related to women's health and traits (Plank-Bazinet, Heggeness, Lund, & Clayton, 2017). Research has also addressed the impact of greater gender diversity and equity on specific health outcome metrics and found these to be more favorable when there was greater involvement of female healthcare staff to patients within management and overall wellness (Champagne-Langabeer & Hedges, 2021).

Accordingly, addressing gender inequalities in a society is important and crucial, not only because of the importance of achieving gender equality in a society, but also because these inequalities in turn have negative effects on health outcomes, which in turn have a negative impact on other dimensions such as social spending, quality of life, productivity levels, multidimensional poverty, education outcomes, among others.

## **2.4 Gender gaps in the labor market**

As previously mentioned, gender gaps in the labor market represent a structural problem: globally, women have a lower participation rate than men (47% compared to 72% for men) and face greater barriers for promotions and leadership positions (ILO, 2022). Factors such as wage discrimination, occupational discrimination, formal and informal rules, and the sexual division of labor are largely responsible for these gaps. This problem is also persistent in all economic sectors, manifesting itself in the form of vertical and horizontal segregation.

The above results in a lost opportunity for economies and countries, since a low participation of women in the labor market results in low productivity, and economic growth below potential: it is estimated that the massive incorporation of women in the labor market would have a positive impact on GDP growth in Latin America and the Caribbean by up to 34% in the coming decades (CAF, 2017). Care work is an important characteristic that explains much of these dynamics in gender differences in the labor market. Care work is socially, culturally, and economically valuable and indispensable for the well-being of individuals and societies. It is through care work that workforces are maintained and reproduced inter-generationally: it reduces the costs to government of additional social services that it would otherwise have to provide to ensure care for the current and future workforce; (UN Women, 2019; Kabeer, 2022). Much of this care is provided within households in an unpaid manner and is provided by women because of stereotypes and gender roles are still prevalent in societies (DANE & UN Women, 2020), and which impact on the lower likelihood of companies and employers to hire women. According to Oxfam (2022) estimates women and girls perform 12.5 billion hours of unpaid labor every day worldwide. Even if this were accounted for at the minimum wage, it would still represent a contribution to the global economy of at least \$10.8 trillion a year.

Women's participation in unpaid care work greatly restricts their ability to earn their own income, to participate actively in the labor market (due to the wear and tear and double workday involved), to participate actively in politics and in society, while excluding them from social protection systems and increasing their



dependency (DANE & UN Women, 2020). The unequal division of unpaid care work is associated with social norms of femininity and motherhood (Razavi, 2007) and is directly related to the occupational split, whereby women remain segregated in part-time work conditions. This results in conditions of greater vulnerability (Hegewisch A, 2011).

According to the International Labor Organization, women responsible for unpaid care work in their households are more likely to be self-employed, to work in the informal economy and not to be contributors to the social security system than women who do not perform unpaid care work (ILO, 2018). Because of the above, women often opt to seek paid work with more flexible schedules, choose careers incorporating maternity and family care decisions, and enter informal and lower-paying markets (in the absence of flexible scheduling options), which reproduces and perpetuates cycles of poverty and gaps in the labor market for this population (Pineda, 2010; Agüero, Marks, & Raykar, 2017).

As for Colombia during 2020, the yield of domestic and unpaid care work was equivalent to 20% of the GDP, which means that, if this work were paid, this would be the most important sector of the country's economy, above the trade sector (18% of the GDP), the public administration sector (15%) and the manufacturing industry (12%). In turn, 78% of the annual hours spent on all unpaid care in households were performed exclusively by women (DANE & UN Women, 2020). Daily, women dedicate 7 hours 14 minutes to care work, twice as much time compared to men, who dedicate 3 hours 25 minutes (DANE, 2020).

This illustrates how gender inequalities that manifest themselves in the home are transferred to the professional sphere, leaving less time available for paid work (or longer working hours) for women. It is not surprising, therefore, that female labor participation rates are higher in countries where there are more women in the labor force in countries where there is greater investment of resources in early childhood public services, short- and long-term care, maternity benefits, disability, sickness, among others (ILO, 2019).

Despite the low participation in the labor market with respect to men, women who participate face additional barriers within it such as occupational segregation, which manifests itself in a narrower set of job options and opportunities (horizontal segregation), and stereotypes that generate and deepen gender wage gaps and reinforce unequal power structures (vertical segregation) (European Institute for Gender Equality, 2017). In addition, there are risks of maternity penalization that end up conditioning the flexibility of female occupation (Correll, Benard, & Paik, 2007).

Women also face wage gaps. These gaps exist when, for the same level of skills, education and abilities, a man is paid more in the labor market than a woman. Globally, women earn 77 cents for every dollar a man earns, creating a structural

income inequality between women and men that is perpetuated over time (UN Women, 2022). In 2022, the global gender gap closed around 68.1% and, at the current rate, it will take 132 years to reach full parity, a slight improvement of four years compared to the 2021 estimate (136 years to parity) (WEF, 2022).

The gender wage gap in Colombia is between 37 p.p. and 19 p.p. according to education level: for the same low education level, a woman would receive only 63 pesos for every 100 pesos that a man would receive. This gap narrows, but still exists for the same high education levels: women receive 81 pesos for every 100 pesos a man receives (Ramos & Bolivar, 2020).

In addition to this, there are glass ceilings, which are those obstacles and informal barriers that prevent a woman from reaching high-level positions in companies and organizations. It is said that this is a glass ceiling because they are not in the legislation nor are they formally established explicitly, but they still exist and systematically prevent the professional growth of a woman to reach high leadership positions. Because of the above, there is an underrepresentation of women in the highest positions in all occupational hierarchies despite advances in their education and preparation.

According to the “Delivered by women, led by men report”, gender gaps in leadership are pervasive across all sectors, including healthcare. Where women represent only 5% of Fortune 500 CEOs (WHO, 2019); 24% of parliamentary seats; and 39% of the total workforce. However, while women face gender-based discrimination and a "glass ceiling" that limits their advancement in male-majority jobs, men entering female-majority professions have advantages that can accelerate their promotion, known as the "glass escalator" (Williams C., 1992).

## **2.5. Gender gaps in the health sector labor market**

The healthcare sector is an important source of employment worldwide. Healthcare and caregiving workers account for approximately 3.4% of total global employment (WHO & ILO, 2022). This sector is also highly feminized: women make up almost 70% of the healthcare and social services workforce worldwide (accounting for almost 90% of the nursing and obstetrics workforce) (WHO, 2021). However, it is estimated that women occupy only about 25% of leadership positions in healthcare (WHO, 2021).

In 2013, while the proportion of women in the workforce worldwide was 39.5%, the proportion of women employed by the social and healthcare sectors globally amounted to 70.3% (International Labor Organization, 2017). For Colombia, the proportion is relatively similar: during 2019 the proportion of women in the workforce was 41.4%, while the proportion of women employed in the healthcare

sector was 73.2%<sup>15</sup>. Despite being a highly feminized sector, it is a sector that faces barriers and gender gaps that particularly affect women in terms of salaries, glass ceilings, recruitment, and in terms of vertical and occupational discrimination.

### **Wage gap**

Gender wage gaps in the healthcare sector are higher than in non-healthcare sectors and are explained to a greater degree by factors such as age, education, and gender for certain occupational categories (WHO and ILO, 2022). This has meant that, worldwide, for every dollar earned by men in the healthcare sector, women earn 20% less, i.e., 80 cents. Added to this issue is the fact that the COVID-19 crisis disproportionately affected workers at the lower end of the salary scale, most of whom are women.

Recent studies suggest that physician wage gaps persist, even after disaggregating by specialty, type of practice, and hours worked (Seabury SA, 2013). For example, Kavilanz (2018) finds that in the United States during 2017, female physicians earned 27.7% less than their male peers. Similarly, in relation to specialties, it is evident that, in the United States, despite the number of female anesthesiologists has increased, they still earn 25% less than their male counterparts (Baird M, 2015; Seabury SA, 2013). Even in feminized healthcare sectors such as dentistry, women continue to earn less than their male colleagues (Vujicic M, 2013).

Decisions regarding family composition also have negative effects on women physicians' pay; one study found that women physicians in the United States earned 11% less if they were married; 14% less if they had one child; and 22% less if they had more than one child (Sasser A. C., 2005). The implications of earning lower wages means, among other effects, lower pensions and less social security income for retired women compared to retired men (Raghavan, 2014), as well as less access to assets, housing, investment, savings, etc.

### **Occupational segregation**

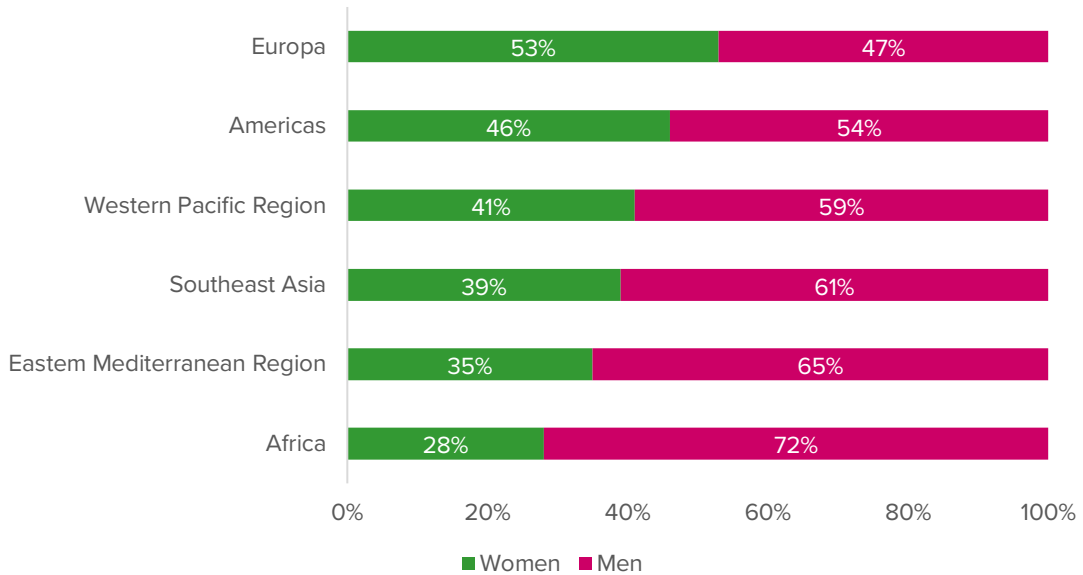
Globally, a profound gender segregation of occupations, both horizontal and vertical, prevails in the healthcare sector. In the case of horizontal segregation, this is determined by social norms and stereotypes that label certain jobs as feminine or masculine. Globally, this is reflected in that women are highly concentrated in primary care, nursing, and obstetrics (Russo G, 2015), and in that they are more

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<sup>15</sup> Data for 2019 from GEIH. DANE

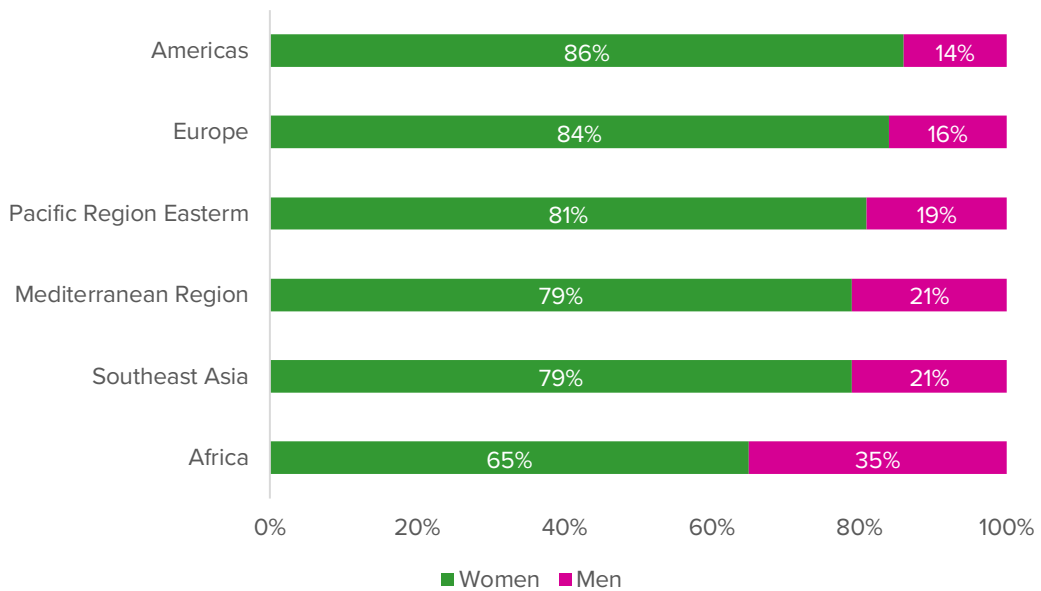
likely than men to choose specializations in the fields of pediatrics, pediatric surgery, obstetrics, gynecology, and dermatology (Lambert E, 2005; Ng-Sueng LF, 2016) (See Graph 1 and Graph 2). In addition, only one-third of female physicians select specialization in surgery compared to males (Novielli K, 2001).

Graph 1 Regional distribution of medical professionals by gender



Source: WHO (2019)

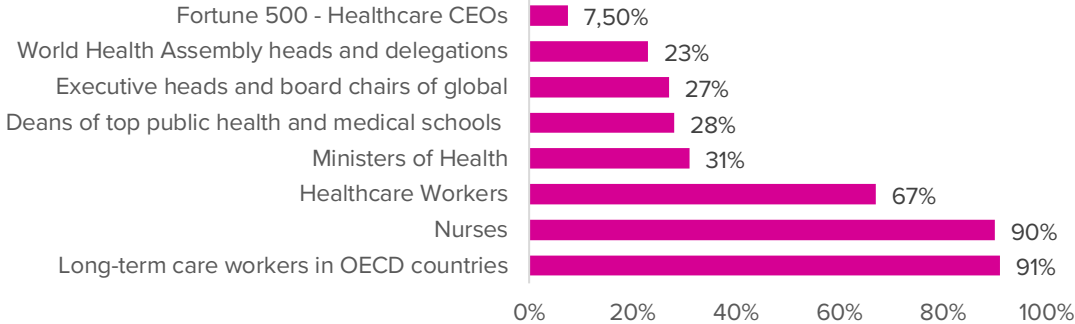
Graph 2 Regional distribution of nursing personnel, by gender



Source: WHO (2019)

On the other hand, vertical segregation is evidenced by the fact that men occupy most of the higher-paid positions among medical and healthcare professions (WHO, 2019). Because of this gender segregation, women tend to be concentrated in jobs with lower salary ranges and with limited opportunities to exercise leadership roles (Reskin, 1993; WHO & ILO, 2022) (See Graph 3). In Colombia, 84.9% of those entering the nursing profession are women, while men occupy most jobs in surgical specialties<sup>16</sup>

Graph 3 Proportion of women in different healthcare areas



Source: WHO (2021)

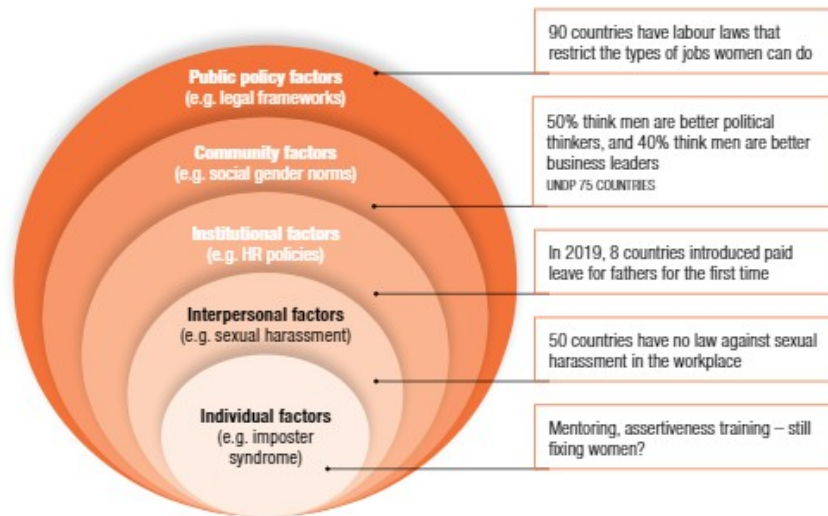
In addition, men have been found to be more likely to obtain private sector jobs in occupations where there are often public sector wage caps. In contrast, women are more likely to obtain jobs in the private sector that are lower paying, tend to offer less job security and favor part-time employment (WHO, 2019). This is in addition to the fact that women have fewer tools at their disposal to cope with these barriers because of the other factors previously mentioned (double workday, greater responsibility with caregiving work, less time availability, etc.). In this regard, it has been found that a lower proportion of women than men are organized in unions, so they benefit less from social dialogue and collective bargaining, which could strengthen their working conditions and opportunities to access leadership (WHO, 2021).

To understand the structural reasons for the glass ceilings faced by women in the healthcare sector to reach leadership roles, the Ecological Model (Women in Global Health, 2019) was proposed, which seeks to identify and classify the different layers and factors that impact a woman's path to leadership roles (See Graph 4). The model places individuals in their social and public policy context and identifies factors at different levels that impact individual action.

<sup>16</sup> Average data of students close to graduation 2016 to 2020. Saber Pro tests.

The model highlights public policy environments and systemic social factors that enable or constrain what may be perceived as individual decisions (WHO, 2021). An important conclusion derived from the model is that it highlights the fact that actions are required at all the layers and levels outlined therein for women to overcome the barriers that are preventing them from reaching positions of influence and leadership in the healthcare sector.

Graph 4 Ecological Model. Factors that influence women to achieve leadership roles.



Source: Women in Global Health (2019)

Occupational segregation of women in the healthcare sector has consequences not only for women workers in the sector, but also for all persons: patients, service delivery and quality, societies, reduction of inequalities, and to achieve the Sustainable Development Goals and attain universal healthcare coverage (WHO, 2021). In that sense, and as highlighted in the Ecological Model, gender equality (in leadership, in occupations, and in salary ranges) cannot be achieved unless broader legal, social, and cultural factors are addressed that are not necessarily confined to the healthcare sector alone but to broader spheres of society.

### 3. DATA AND METHODOLOGY

To carry out a diagnosis of the healthcare sector in Colombia from a gender perspective, a descriptive analysis is undertaken based on available national statistical sources. For the analysis, various sources of information were consulted that give an account of the people who make up the human talent in the sector. First, the National Registry of Human Talent in Healthcare (ReTHUS), which contains information on persons authorized to practice health-related professions and occupations in Colombia.<sup>17</sup> Second, information on employed persons in the healthcare sector is used using the Large Integrated Households Survey (GEIH, for its initials in Spanish) for the years 2019 and 2020.

The ReTHUS<sup>18</sup> database provides information on the education level and academic program of individuals and provides information on the Base Contribution Income (IBC)<sup>19</sup>, which is used as an approximation of the individual labor income of healthcare personnel. It is worth clarifying that, since the average IBC is an arithmetic average, it may be imprecise in reflecting the real income levels of the healthcare personnel analyzed. This limitation of the indicator is increased in small samples, which is why professionals in master's and doctoral programs are not included in the analysis of salary gaps, since they have low prevalence. Therefore, only assistants, professional technician, technology, university, and specialization levels of education are included<sup>20</sup>. Similarly, when analyzing the average IBC as a proxy variable for income, it should be considered that the ReTHUS information does not have information on individuals' years of experience, which is usually an income determining factor.

The analysis also uses the GEIH microdata for 2019 and 2020 to explore the dynamics of the COVID-19 pandemic among those employed in the sector and unpaid caregiving work by gender. The GEIH is a statistical operation by probability sampling, which implies that it has limited representativeness and, therefore, when very small

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<sup>17</sup> Information is available as of December 31, 2021. The ReTHUS does not contain information on who is currently working in each profession, years of experience (which usually determines remuneration levels), or their geographic location. This should be understood as a limitation of the data that may, in turn, limit the analysis and scope of the results.

<sup>18</sup> The Information Cube integrates information from ReTHUS and PILA (Planilla Integra de Liquidación de Aportes).

<sup>19</sup> Base Contribution Income (IBC, Ingreso Base de Cotización in Spanish) refers to a portion of the salary of the dependent or independent workers that is taken as the basis for applying the respective contribution percentage at the time of making the contribution to the General Social Security Healthcare System: healthcare plan, pension fund, occupational risks, and family compensation fund. The IBC for independent workers corresponds to 40% of the monthly value of the contract and for dependent workers it corresponds to the total income received (Ministry of National Education, 2022).

<sup>20</sup> In the Annexes section you will find the details of each of the academic programs that make up each education level (Table 6). The education levels in the ReTHUS database referring to specialization, sub-specialization, master's, and doctorate levels are equivalent to the Postgraduate educational level in the Large Integrated Households Survey.

sample groups with low prevalence are used, the accuracy of the results may be compromised. Consequently, in the descriptive statistics presented in this section, the results of special attention due to low prevalence are indicated in italics.

General descriptive statistics for the ReTHUS and GEIH databases are presented below. Table 1 and Table 2 summarize the information from the ReTHUS database by gender. Based on the ReTHUS information, with data as of December 31, 2021, 80.3% of the persons active to practice in the health sector were women, a proportion that corresponds to the overall trend.

Table 1 Number of people active in ReTHUS<sup>21</sup>, according to sex, December 2021.

Sex	Total	%
Women	967,899	80.3
Men	236,686	19.6
Not defined and/or not reported	686	0.1
<b>Grand total</b>	<b>1,205,271</b>	<b>100.0</b>

Source: Own elaboration based on ReTHUS

On the other hand, according to the GEIH, on average for 2019 and 2020, 72.6% of those employed in the healthcare sector are women (Table 2). Because of the pandemic, in 2020 there was a decrease in employment of 6.7 p.p. However, the loss in women's employment was greater than that of men by 5.3 p.p.

Table 2 Population employed in healthcare sector activities<sup>22</sup>, by sex. 2019 y 2020

Sex	2019	%	2020	%	% Var
Women	509,181	73.2	468,067	72.0	-8.1
Men	186,788	26.8	181,591	28.0	-2.8
<b>Total</b>	<b>695,969</b>	<b>100</b>	<b>649,658</b>	<b>100</b>	<b>-6.7</b>

Source: Own elaboration based on GEIH

<sup>21</sup> Data as of December 31, 2021.

<sup>22</sup> To identify the population employed in the healthcare sector, the following branches of activity of the International Standard Industrial Classification of all economic activities Revision 4 adapted for Colombia (ISIC Rev.4) were considered A.C.); 8610: Hospital and clinic activities, with hospitalization; 8621: Medical practice activities, without hospitalization; 8622: Dental practice activities; 8691: Diagnostic support activities; 8692: Therapeutic support activities; 8699: Other human healthcare activities; 8710: General residential medicalized care activities; 8720: Residential healthcare activities for the care of patients with mental retardation, mental illness and substance abuse; 8730: Institutional healthcare activities for the care of the elderly and/or disabled.



Regarding the occupational position, most of those employed in the sector are private sector employees, with 68.2% of women and 63.7% of men, followed by self-employed workers with 24.2% and 24.6%, respectively. However, despite the low prevalence figures for government employees, there is a higher participation of men with 8.1% compared to 6.1% for women. Similarly for employers, with 3.5% for men and 1.3% for women (Table 3).

Table 3 Population employed in healthcare sector activities, by sex and occupational position. 2019 y 2020

Occupational position	2019		2020	
	Women	Men	Women	Men
Private sector employee	347,156	118,997	331,380	116,682
Self-employed	123,190	46,014	100,723	43,566
Government employee	30,993	15,147	28,943	16,009
Employer	6,487	6,524	6,772	5,027
Unpaid worker	994	11	176	114
<b>Total employed</b>	<b>509,181</b>	<b>186,788</b>	<b>468,067</b>	<b>181,591</b>

\* Unpaid worker includes the categories unpaid family worker and unpaid worker in enterprises of other households.

Notes: Due to rounding and the non-inclusion of the category "Other, which?", the sum of distributions, absolute variations and contributions may differ from the total.

Source: Own elaboration based on GEIH

The statistics presented below provide an overview of the composition of human talent in the healthcare sector in Colombia. It was constructed from a descriptive statistical analysis, considering variables such as education, salary gaps, informality and unpaid caregiving tasks and territorial distribution. In order to characterize the distribution of human talent in the health sector throughout the national territory, a regional analysis was performed following Ruiz et al. (2008) as follows: Bogota D.C, Mid, Mid-West, Atlantic Coast, South-West and Orinoco, Amazon and Chocó. This distribution combines territorial elements with elements of the level of development of the regions. For latter reason, Bogotá D.C. is separated from the Mid region and the department of Chocó is integrated with the departments of Amazon and Orinoco<sup>23</sup>.

<sup>23</sup> The grouping of the regions by department is shown in the Annexes section (Table 7).

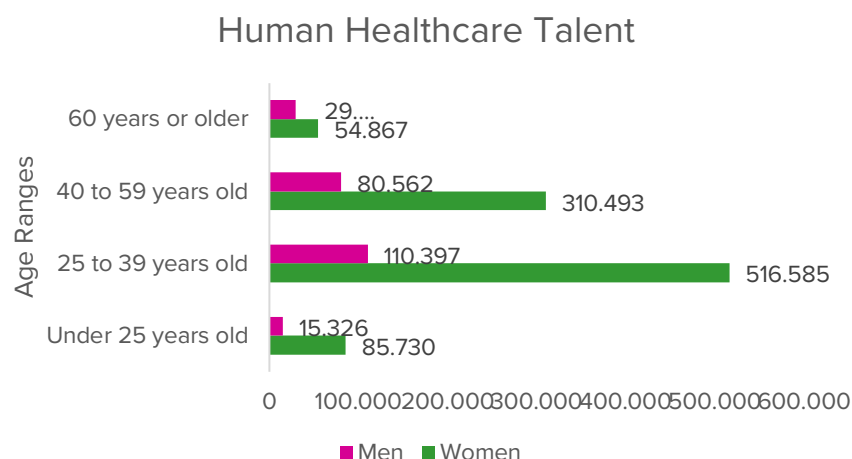
## 4. RESULTS

This section presents the main results on the current state of the Human Healthcare Talent in Colombia from a gender perspective. First, an overview of women's participation in the sector is illustrated, as well as a regional approach, followed by information on women's working conditions and salaries. Finally, relevant figures on informality in the sector, as well as figures on caregiving tasks and unpaid household jobs linked to gender roles.

### 4.1. Women participation in Human Healthcare Talent

In line with the literature, the healthcare sector in Colombia is highly feminized: women represent 80.3% of the total number of persons authorized to practice health-related professions and occupations. About 53.4% (516,585) of women are between 25 and 39, while the proportion of men in this age group is 46.6% (110,397) (see Graph 5).

Graph 5 Distribution of Human Resources in Health, by sex and age

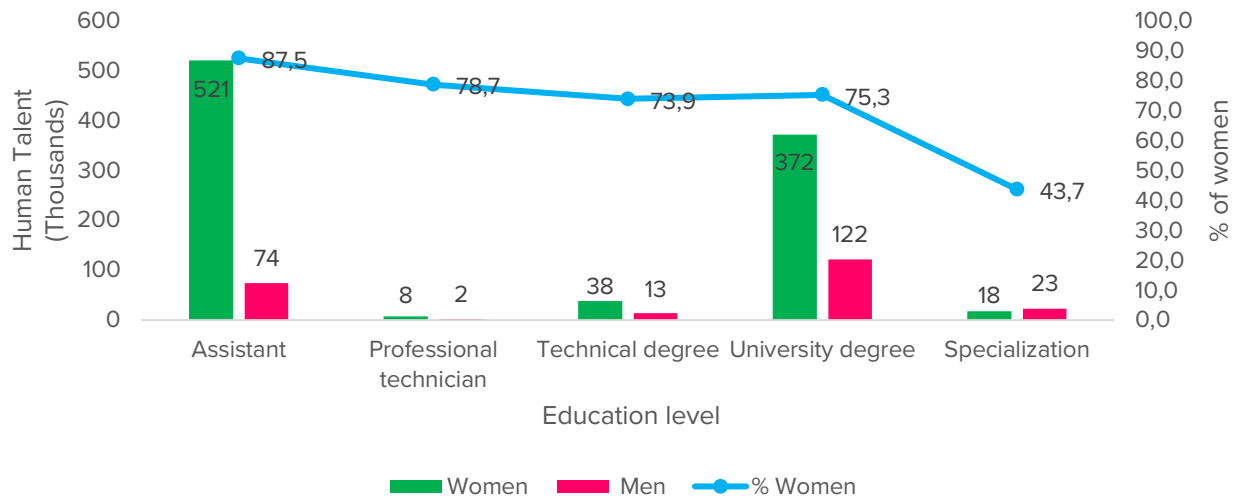


Source: Own elaboration with information from ReTHUS<sup>24</sup>.

Graph 6 shows the distribution of men and women by education level, as well as the participation of women at each level. It is worth noting that from the assistant level to the university level, there is a tendency for women's participation to be higher than that of men, above 70%. However, this trend is reversed for specialization studies where the highest participation is of men with 56.2%.

<sup>24</sup> Data as of December 31, 2021.

Graph 6 Distribution of Human Talent according to gender and education level, and percentage of women by education level



Source: Own elaboration with information from ReTHUS<sup>25</sup>.

Note: the percentage of women corresponds to the total number of women out of the total population at each education level.

As seen in Graph 6, the assistant education level<sup>26</sup> has the highest concentration of women, as 53.8% (520,505) of the total number of women in the healthcare sector have this education level, compared to 31.2% (73,946) of men. This is followed by university education with 38.5% (372,355) of women at this level and 51.5% (121,938) of men. These figures are of concern when compared to the aggregated employment figures at the national level, which shows a higher concentration of women employed at the highest levels of education compared to men (DANE & Legal Commission for Women's Equity, 2020) (See Table 4), as this shows that women would have a higher employment rate if they could enroll in a higher proportion of higher education programs.

<sup>25</sup> Data as of December 31, 2021

<sup>26</sup> The term Healthcare assistant is used to replace the term coined in Colombia for the level of Education for Work and Human Development (FTDH) (Ministry of Health and Social Protection, Republic of Colombia, 2012).

Table 4 Employed population by highest education level according to sex. National total (2018-2019). Figures in thousands

Sex	Highest educational level	2018	2019	% 2019
Man	Total Men	13,131	13,063	100%
	None	2,283	2,179	16.7%
	Basic primary education	3,388	3,257	24.9%
	Basic secondary education	767	788	6.0%
	Secondary education	4,244	4,332	33.2%
	Professional technical and technological education	1,160	1,175	9.0%
	Higher education	887	908	7.0%
	Postgraduate	399	423	3.2%
Woman	Total Women	9,326	9,224	100%
	None	1,101	997	10.8%
	Basic primary education	1,846	1,747	18.9%
	Basic secondary education	483	466	5.1%
	Secondary education	3,180	3,253	35.3%
	Professional technical and technological education	1,279	1,287	14.0%
	Higher education	1,003	1,015	11.0%
	Postgraduate	433	459	5.0%

Source: DANE & Legal Commission for Women's Equity (2020).

In general terms, for every 1000 women with university education in the healthcare sector, only 48.3 have specialized studies, while this ratio for men is 189.8, reflecting the fact that men proportionally have greater access to these specialized postgraduate programs, which, in the medium and long term, result in higher income and job stability. Specifically for medicine, there are 242 female specialized physicians for every 1000 trained in general medicine, while this ratio for men is 371, reflecting higher levels of access and permanence in postgraduate higher education for men than for women.

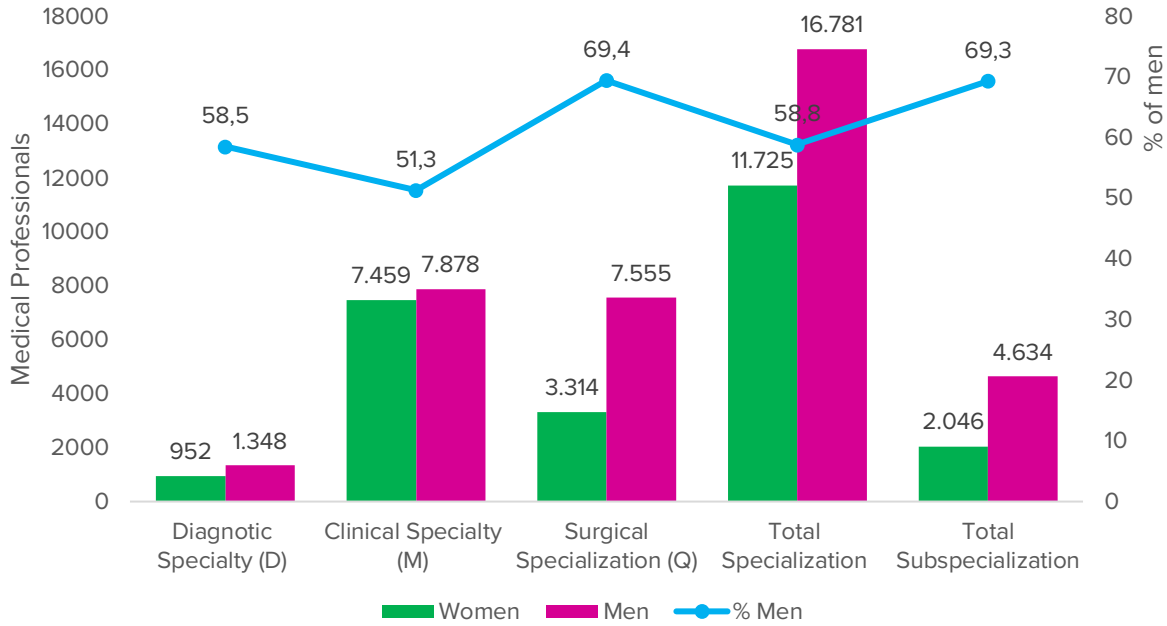
According to the literature, horizontal segregation for medical professionals is evidenced in the case of Colombia in Graph 7, where 69.4% of surgical specialists (Q)<sup>27</sup> and 69.3% of subspecialists are men. On the other hand, the highest participation of women is in Clinical Specialties (M)<sup>28</sup> with 48.6% of women followed by Diagnostic Specialties (D)<sup>29</sup> with 41.3% women.

<sup>27</sup> Surgical specialties (Q) use invasive or noninvasive means to treat, modify or physically remove pathologic structure include: general surgery, pediatric surgery, plastic surgery, gynecology and obstetrics, neurosurgery, ophthalmology, orthopedics and traumatology, otolaryngology, urology, and other surgical specialty.

<sup>28</sup> Clinical specialties (M) assist the patient personally with preventive, diagnostic and therapeutic activities, generally using NON-surgical techniques, including: pediatrics, anesthesiology, internal medicine, dermatology, psychiatry, among others.

<sup>29</sup> Diagnostic specialties (D) do diagnoses and suggest treatments to clinicians, so the relationship with the patient

Graph 7 Distribution of medical professionals by gender and specialty



Note: the percentage of men corresponds to the total number of men out of the total population at each level of specialty.

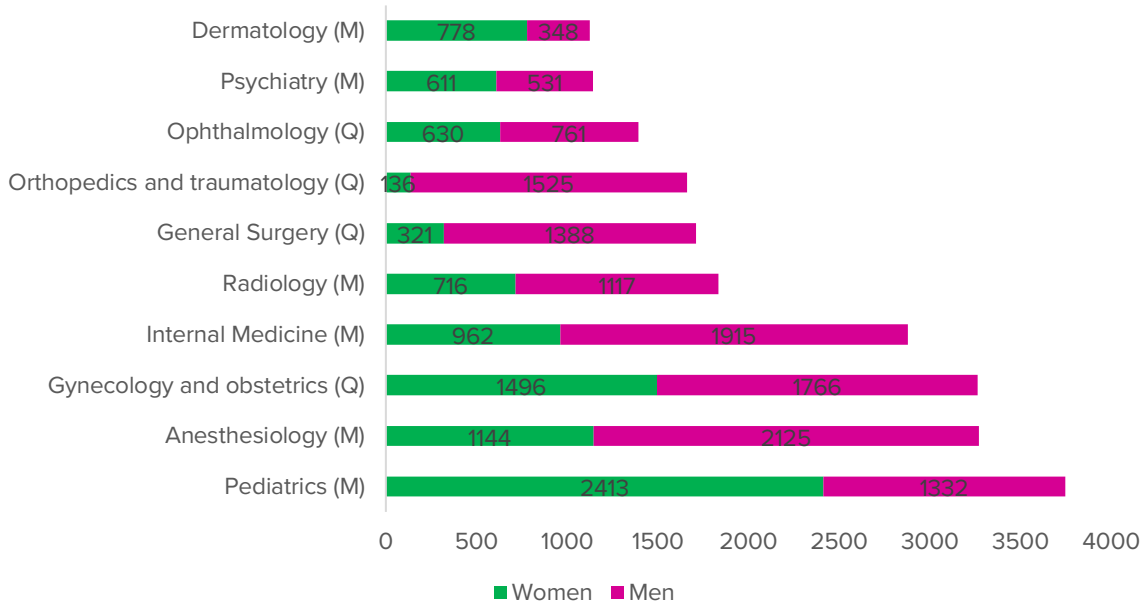
Source: Own elaboration with information from ReTHUS<sup>30</sup>.

Graph 8 shows the distribution by gender of the top 10 specialties with the highest number of professionals, with the type of specialty to which they belong indicated in parentheses, as previously mentioned. Within the specialties, there are three in which the participation of women is greater than that of men, and they have the characteristic that they are clinical specialties, namely, Pediatrics 64.4% (2,413), Dermatology 69.1% (778) and Psychiatry 53.5% (611). However, for the rest of the specialties, the number of men exceeds the number of women, with Orthopedics and Traumatology being the specialties with the highest proportion of men (91.8%). For future studies, it would be interesting to deepen the analysis of the motivations and determinants differentiated by gender that influence the choice of these careers, beyond occupational segregation and cultural prejudices.

is reduced, including: radiology and diagnostic imaging, pathology and nuclear medicine.

<sup>30</sup> Data as of December 31, 2021.

Graph 8 Top 10 specialties with the highest number of professionals by gender



Source: Own elaboration with information from ReTHUS<sup>31</sup>.

These findings are in line with the international literature which states that women are more likely to choose specialties in the fields of pediatrics, pediatric surgery, obstetrics, gynecology, oncology, and dermatology (Lambert E, 2005). Some studies attribute this type of distribution among specialties to the balance that, due to the cultural factors mentioned above, a woman would have to deal between a medical career and her family (maternity leave, time for breastfeeding, childbearing, etc.). Burton KR, (2004) finds in this regard that in Canada women work fewer paid hours (although more than men if double time with unpaid care work is considered), see fewer patients, are more likely to leave the medicine career earlier, and join a higher proportion of professional organizations than men. These aspects correlate in part with specialties such as Dermatology and Oncology, which tend not to have emergency services or long hospital hours, but more consultation hours, offering greater schedule flexibility that women, in light of the distribution of their work and family burdens, may see as an advantage in greater proportion than men (Ng-Sueng LF, 2016).

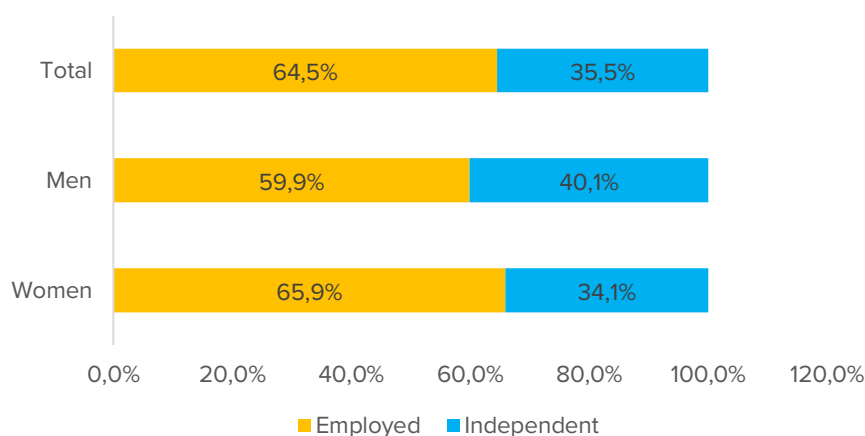
<sup>31</sup> Data as of December 31, 2021.

## 4.2. Labor and salary conditions of women in the healthcare sector

The employment structure in Colombia according to DANE for 2019<sup>32</sup> shows that 89.6% of the total number of workers are distributed between employed or dependent workers and independent workers. Private and public employees represent 43.6% of employment, while independent workers represent 46.0% (self-employed 42.4% and employers 3.6%). At the national level, from a gender perspective, 43.7% of women are dependent and 42.9% are independent workers, while for men these figures are 43.5% and 48.2%, respectively.

With regard to the composition of the labor market within the healthcare sector in Colombia, between employed<sup>33</sup> and independent workers<sup>34</sup> contributors by gender, Graph 6 shows that, on average, 64.5% of the population that makes up the human talent contribute as employees (581,757), with this proportion being 1.4 p.p. higher for women, suggesting better work conditions for women in this sense, given that people with labor contracts, as opposed to independent worker contracts, receive a series of non-wage benefits such as severance pay, holidays, and the employer assumes part of the employee's social security contribution.

Graph 9 Percentage of men and women according to type of contributor, employed or independent worker, 2019



Source: Own elaboration with information from ReTHUS

Regarding wage gaps, in Colombia these prevail between men and women for all education levels in the healthcare sector, as well as in the rest of the economic sectors and by education level (DANE & UN Women, 2020). The data shows that this gap is greater than 10% at all education levels in the healthcare sector except for the

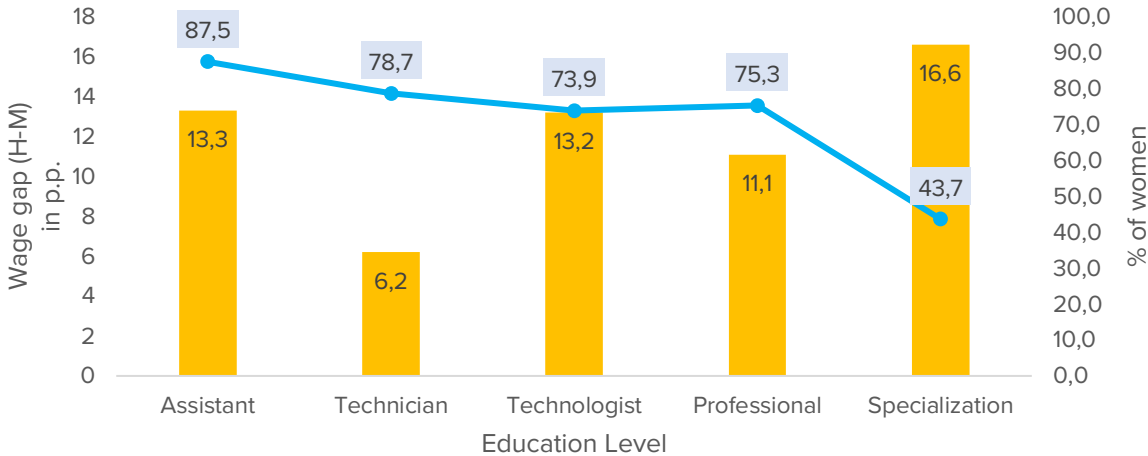
<sup>32</sup> Data for 2019 from GEIH annexes by sex. DANE

<sup>33</sup> Those employed by a work contract.

<sup>34</sup> Those workers who are paid on a fee basis.

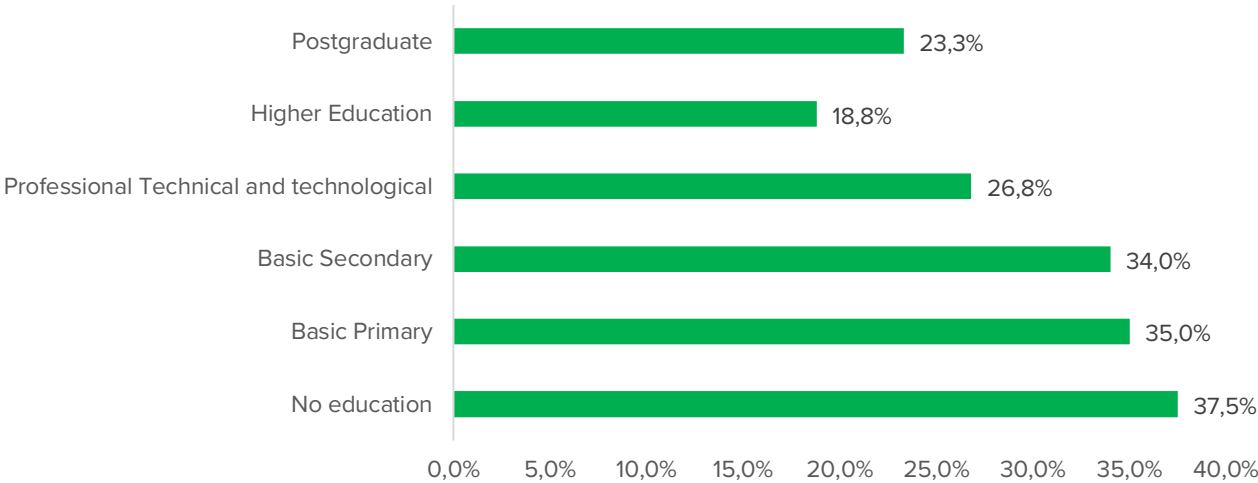
technical level, where it is 6.2%, and the gap between men and women with specialization is greater (See Graph 10). Although in themselves the figures are concerning, they contrast with the figures at the national level, where the gaps are wider: at the national level the wage gap between men and women was 12.1% for 2018, being especially higher for lower levels of education and rural areas (DANE & UN Women, 2020) (Graph 11).

Graph 10 Proportion of women (right) and wage gaps (M-W) (left) by education level, 2019



Note: The wage gap is the difference between the average monthly wages of men and women, expressed as a percentage of the average male wage. A negative figure indicates that the average salary of women is higher than that of men.  
 Source: Own with information from ReTHUS, 2019.

Graph 11 Wage gap between men and women by education level in Colombia, 2018.



Source: DANE & UN Women (2020)



Overall, the largest number of assistant personnel is composed mainly of women, however, there is an average wage gap in favor of men, while women earn an average of \$4,256,298 pesos, men earn \$4,908,475 Colombian pesos<sup>35</sup>. A similar situation occurs at the professional level, where there are 372,000 women (75.3% of the total number of professionals), but there is a wage gap of 11.1 percentage points in favor of men. This may reflect what the WHO indicates about the asymmetries in bargaining power observed between men and women (WHO, 2021).

The wage gap is particularly high for the specialization levels, where the trend is reversed, with a higher participation of men, and the wage gap trend continues even at this level of education where women earn on average \$41,534,422 pesos per month while men earn \$49,776,028 Colombian pesos<sup>36</sup>.

Within the top 10 specialties (Graph 12) with the highest number of professionals, wide wage gaps are observed for all specialties except Radiology and Diagnostic Imaging, where the gap is 0.3 p.p. Similarly, it is observed that the salary gaps are especially large in the specialties of General Surgery (24.5 p.p.) and Orthopedics and Traumatology (18.2 p.p.), while these are the specialties with the lowest female participation, 18.8% and 8.2%, respectively. Female specialists in General Surgery earn \$34,627,586 pesos, while male specialists receive \$45,835,779 Colombian pesos<sup>37</sup>. Women specialists in Orthopedics and Traumatology earn an average of \$29,699,799 Colombian pesos, while men earn \$36,295,014 Colombian pesos<sup>38</sup> (See Graph 13).

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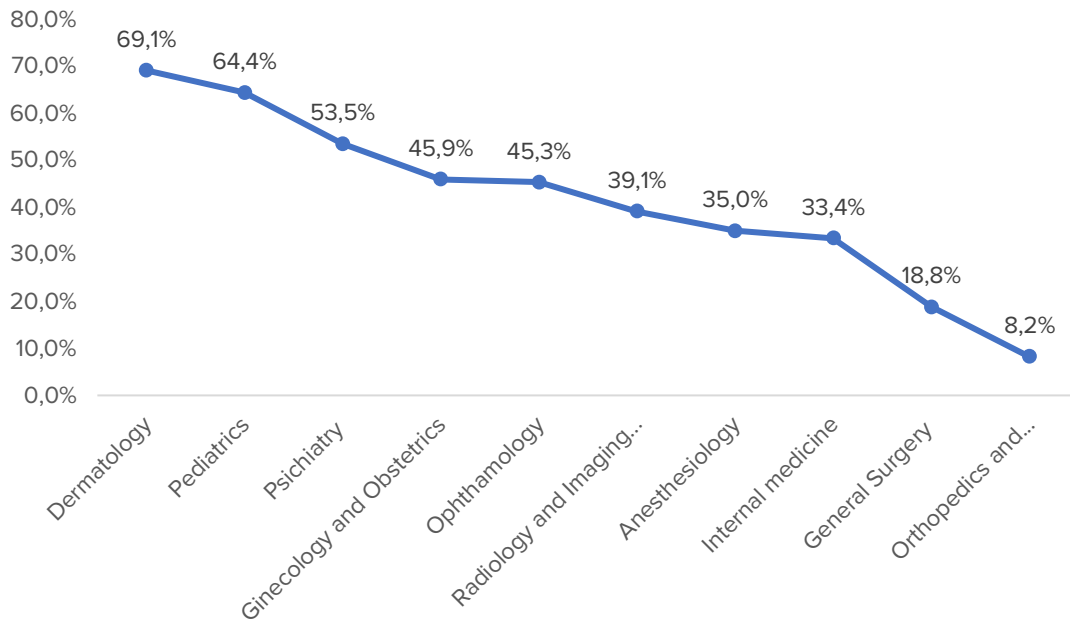
<sup>35</sup> Equivalent to \$1,110 USD for women and \$1,281 USD for men. ER at \$3,829.6 USD/COP.

<sup>36</sup> Equivalent to \$10,839 USD for women and \$12,990 USD for men. ER at \$3,829.6 USD/COP.

<sup>37</sup> Equivalent to \$9,037 USD for women and \$11,962 USD for men. ER at \$3,829.6 USD/COP.

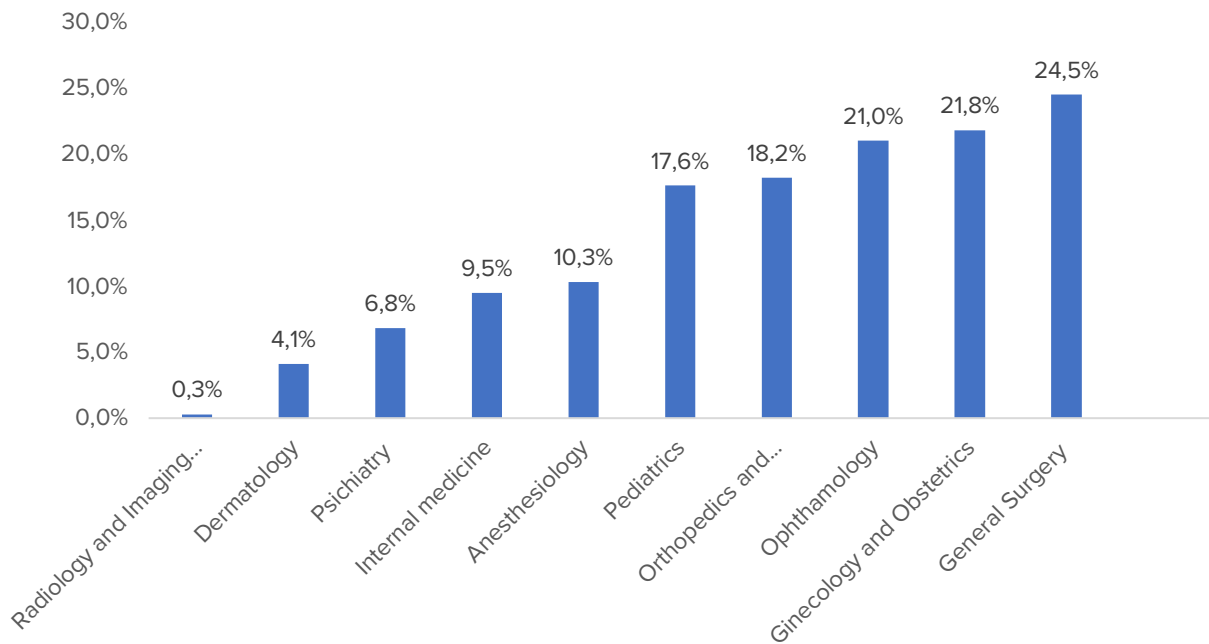
<sup>38</sup> Equivalent to \$10,839 USD for women and \$12,990 USD for men. ER at \$3,829.6 USD/COP.

Graph 12 Female participation in the 10 specialties with the highest number of personnel in Colombia. 2019



Note: Includes self-employed and dependent workers.  
 Source: Own elaboration based on ReTHUS

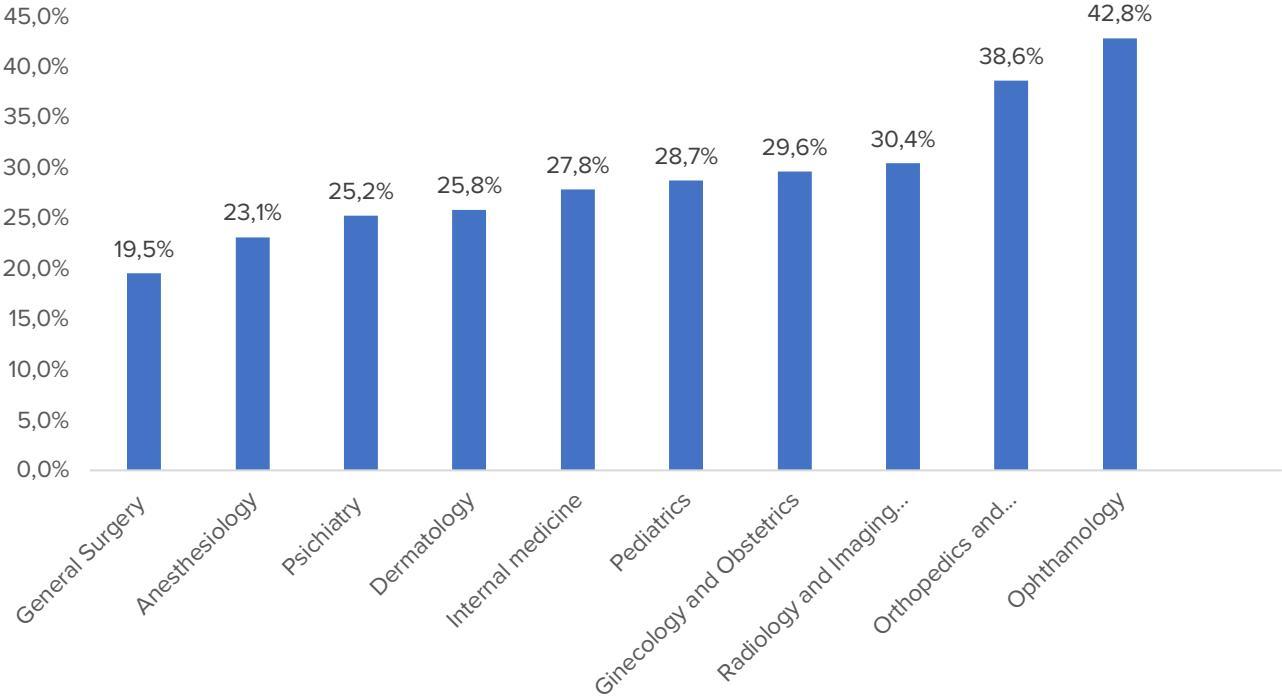
Graph 13 Wage gaps (Men - Women) for the top 10 specialties according to dependent contributor, 2019.



Note: the percentage of women corresponds to the total number of women out of the total population in each specialty.  
 Source: Own elaboration based on ReTHUS

In relation to the wage gaps for independent worker workers within the top 10 specialties, Graph 14 shows gaps of more than 19.5% for all specialties, with higher gaps than for employed workers. The highest gap is found in Ophthalmology (42.8 p.p.), which is equivalent to a salary difference between men and women of \$13,445,844 Colombian pesos<sup>39</sup>. Orthopedics and traumatology presents the second highest salary gap with 38.6 p.p., which is equivalent to a salary difference of \$11,782,112 pesos<sup>40</sup>.

Graph 14 Wage gaps (Men-Women) for the top 10 specialties according to independent worker contributor<sup>41</sup>, 2019.



Source: Own elaboration based on ReTHUS

Note: the percentage of women corresponds to the total number of women out of the total population in each specialty.

The foregoing accounts for the deep inequalities existing in the labor market of the healthcare sector in Colombia, since despite being a highly feminized sector, men continue to earn systematically more than women for all education levels, with this gap increasing significantly at the levels of specialization. This finding is in line with the literature since, recent studies suggest that gaps in physician salaries persist even after controlling for specialty, type of practice and hours worked (Seabury SA, 2013).

<sup>39</sup> Equivalent to \$3,511 USD. ER at \$3,829.6 USD/COP.

<sup>40</sup> Equivalent to \$3,077 USD. ER at \$3,829.6 USD/COP

<sup>41</sup> An independent worker contributor in Colombia is considered any person that does freelance, contract or temporary work. In Colombia there are two types of contribution regimes, paid and subsidized. Independent workers are mandate by law to pay contributions to the social security system.

In addition, it also highlights the problematic issue that exists between types of employment relationships and how these correlates with the extent of wage gaps: for independent-worker women, the wage gap is often significantly wider than for employed-working women in the same specialties. More emphasis should be placed on future studies that explore what mechanisms are influencing this widening of gaps for different types of employment.

**4.3. Informality, unpaid housework and caregiving tasks**

In Colombia, women are more likely to be informal than men. According to DANE figures, for the total of the 13 main cities and metropolitan areas, the proportion of the informal employed population<sup>42</sup> in 2019 for women was 48.7% and 44.1% for men. This trend applies to the health sector where for 2019 the proportion of informal women was 13.6%, while for men it was 11.1%, trends that are maintained for 2020<sup>43</sup> (See Table 5). Informality in the female population has consequences that imply a higher level of poverty, labor precariousness, high unemployment and low economic empowerment, among the deepening of other intersectional vulnerabilities (Bolívar, 2021).

Table 5 Proportion of total informal employed population 13 cities and metropolitan areas and total healthcare sector, by sex between 2019 and 2020<sup>44</sup>

Proportion of population	Gender	2019	2020	Absolute change in p.p.
13 cities and areas metropolitan	Man	44.1	47	3.1
	Woman	48.7	48	-0.6
Health sector	Man	11.1	9	-2.5
	Woman	13.6	10	-3.3

Source: Own elaboration based on figures from DANE, GEIH (2019-2020).

In addition to the informality component that affects women more than men, there are social and cultural dynamics that lead to greater participation of women in domestic

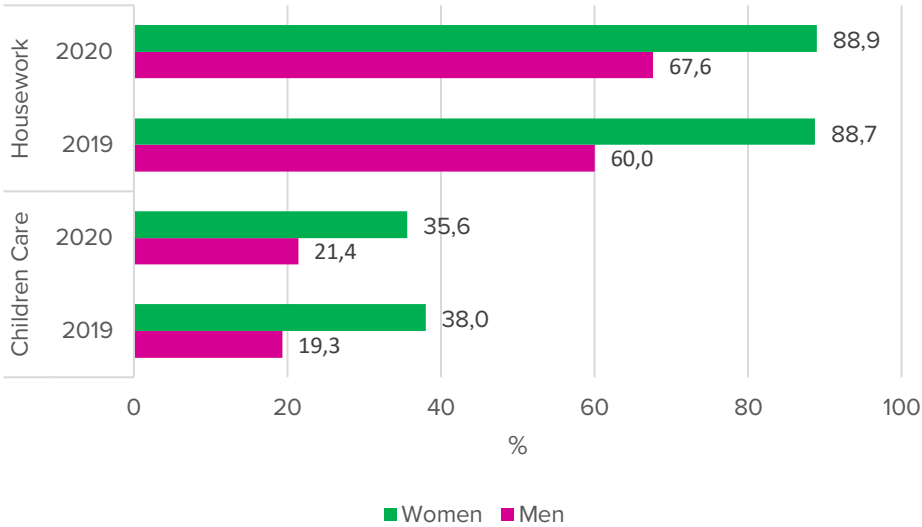
<sup>42</sup> Regarding the definition of informality, the definition provided by DANE 2016 is used, where the informally employed are the persons who during the reference period were in one of the following situations: 1. Individual employees and laborers working in establishments, businesses or companies that employ up to five persons in all their agencies and branches, including the employer and/or partner; 2. Unpaid family workers in enterprises of five workers or less; 3. Domestic employees in enterprises of five workers or less; 4. Day laborers or laborers in enterprises of five workers or less; 5. Self-employed workers who work in establishments of up to five persons, except independent worker professionals; 6. The informality rate is estimated as the number of informal workers out of the total number of employed persons in the healthcare sector.

<sup>43</sup> The definition of informality used in the GEIH differs from the classification of employed and self-employed persons registered in ReTHUS, which come from PILA, as the contributing population.

<sup>44</sup> Due to the change in the GEIH collection operation due to the COVID-19 pandemic, it was not possible to obtain information on informality for the months of March and April 2020. Starting in May 2020, the variables that allow us to obtain data and indicators of informality will be collected again.

and caregiving work, which includes household chores and unpaid caregiving tasks. These dynamics are also observed in the healthcare sector, as illustrated in Graph 15. In 2019, 88.7% of women reported having performed unpaid household chores, while in the case of men this percentage was 60.0%. Similarly, the same trend is maintained in relation to childcare, where for women this percentage is 38.0%, while for men it is 19.3%.

Graph 15 Percentage of the employed population in the healthcare sector that performed unpaid household chores and childcare by gender, 2019-2022<sup>45</sup>



Source: Own elaboration with information from GEIH

Continuing with national trends, in the healthcare sector, women are responsible for more unpaid work in household chores and caregiving. In 2020, out of every 10 women employed in the health sector, approximately 3 also cared for children at home, while out of every 10 employed men, approximately 2 did so. With regard to household chores, approximately 9 out of every 10 women employed in the sector were in charge of such chores, while 7 out of every 10 employed men were in charge of them. These figures are in line with the trend that has been found at the national level, of the total annual hours dedicated to unpaid care work, women perform 78%, while men perform only 22% (DANE, 2020), showing that in the healthcare sector women are also having longer working hours (paid and unpaid work) compared to men, in addition to the fact that they have wage gaps.

<sup>45</sup> Given the situation of the Covid-19 pandemic, the data for 2020 has fewer observations in the months of March, April and May, due to the fact that their collection operation was affected by the confinements ruled to face the spread of the coronavirus.

In general, the figures presented show that women in the healthcare sector in Colombia, as in the rest of the economic sectors, have important barriers, both within their homes, in the labor market, and in the education processes that negatively affect their wellbeing by putting them at a disadvantage compared to the male population with similar characteristics. This first approach to the healthcare sector figures with a gender perspective is an important input to open and deepen the debate regarding the structural barriers faced by women in the sector and to begin the process of change management required to achieve greater levels of equality which, as previously mentioned, would not only benefit women but also the sector itself and the society in general.

## 5. CONCLUSIONS

The existence of gender bias in the labor market generates negative effects not only for women but also for the economy, human development, and societies in general. The occupational segregation of women in the healthcare sector has consequences not only for women workers in the sector, but has negative consequences for all persons: patients, service delivery and quality, societies, reduction of inequalities, and for achieving the SDGs and achieving universal healthcare coverage (WHO, 2021). However, the ecological model illustrates that gender parity cannot be achieved unless broader legal, societal and cultural factors are addressed.

According to the WHO, global healthcare can be greatly weakened by excluding the talents, ideas, and knowledge of the female population, while women often broaden the healthcare research agenda with a differential focus, strengthening healthcare for all (WHO, 2021). In this sense, women in leadership roles have the capacity to broaden action agendas by providing greater priority to issues such as sexual and reproductive health, as well as issues that affect women and girls to a greater extent and that currently do not have the priority they should (WHO, 2021; Downs, Reif, Hokororo, & Fitzgerald, 2014).

The existence and persistence of gender discrimination affects decisions regarding women's education and training based on the expectations they perceive that the labor market can offer them, which is why it is a problem that has intergenerational effects and must be addressed urgently (ILO & UNDP, 2019). Studies and statistics on human talent in the healthcare sector globally show that there are persistent and structural issues of gender segregation that negatively affect women in terms of opportunities for growth, professional and personal development, they are restrained to occupy leadership positions, have less influence in decision-making processes and negotiation dynamics than men, and present a generalized wage inequality in relation to their male peers.

Accordingly, and as shown throughout this document, these dynamics are also observed in the Colombian labor market. The results for Colombia in the healthcare sector show that the average wage gaps are 12.8%<sup>46</sup> (higher for specialization levels), which are very similar to those found for the national total (12.1%). The above suggests that in general, women are finding barriers that hinder equity in terms of salaries and that should be studied and addressed both as a structural problem, as well as sectoral, with the purpose of ensuring that women achieve a remuneration that is

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<sup>46</sup> Salary gap calculated for auxiliary professionals, technicians, technologists, university professionals and professionals with specialization based on RETHUS.

commensurate with the work they do, dismantling the formal and informal barriers that are preventing salary equity in the healthcare sector in particular.

Similarly, the results show that women workers in the healthcare sector also face a double workday between paid and unpaid caregiving activities, which fall disproportionately upon them. Studies indicate that there is a correlation between this burden and women's professional decisions to opt for specializations that allow greater time flexibility, which, in the medium and long term, has repercussions on the deepening of both horizontal and vertical segregation, as well as on the expected value of their work income. The document shows that in Colombia the national trend of greater female participation at the specialization level of education is reversed, since in the case of the healthcare sector, men are mostly at postgraduate level. In addition to this, in the medical specialties, men are more prevalent in surgical specialties, while women are more prevalent in the clinical specialties of dermatology, pediatrics and psychiatry, which have been shown to have greater time flexibility.

Gender biases are present at all organizational, social and political levels: in the mechanisms through which strategies and policies are designed and implemented, hence clear strategies and attention is needed at every level, to reduce and eliminate these biases. Gender inequalities are largely governed by social norms and can be changed to improve the health of millions of girls and women around the world. This process of change involves efforts to ensure that laws, norms, and organizational goals protect and promote gender equity (WHO, 2008).

In light of the findings on gender gaps for women workers in the healthcare sector in Colombia, it can be concluded from the document that, although there are dynamics that explain and reproduce gender inequalities (in the labor market and in households) that transcend the healthcare sector, it is also important to address at the same time the causes and factors that reproduce and perpetuate these dynamics from a sectoral and organizational approach. The healthcare sector in Colombia requires the systematic incorporation of a gender perspective (Gender Mainstreaming) that is institutionally appropriated and implemented at all levels (educational centers, research centers, EPS, IPS, clinics, hospitals, recruitment units, etc.). The presence of women in leadership positions in the healthcare sector is key as they have a key role for sustainable and human development (Langer, et al., 2015). For the above, it is important to have a catalytic gender unit with strong institutional positioning, authority and budget (WHO, 2008). In particular, actions should be cross-cutting and address individual, collective, professional, educational, cultural and social causes, as well as to promote a range of actions including (but not limited to) the following:



- The medical academia and scholars should undertake a reflective process about the gender-biased power and inclusion dynamics that they currently have in their admission, education, and promotion processes, and foster a culture of equity and inclusion.
- Design and implement actions aimed at breaking the "glass ceilings" in the different spheres of the healthcare sector that currently limit the professional development of women with tertiary education, who continue to face obstacles that restrict their possibilities of achieving economic, social, and cultural empowerment in their work environments and communities. This includes the design of public policies aimed at promoting equal opportunities in formal education, vocational training and job placement and intermediation. (ILO & UNDP, 2019).
- Address occupational segregation and explore mechanisms to account for women's choices and aspirations in areas of leadership in the healthcare sector, as well as formulating evidence-based strategies to address the healthcare workforce crisis and build health systems that address the needs of disadvantaged populations.
- Recognize, in different work environments, that occupational segregation is not neutral, and that it seriously affects women's possibilities of achieving social and economic autonomy. Failure to address occupational segregation would perpetuate not only the unfavorable conditions that women already face today but would also affect future generations through the impact on their future decisions in terms of entering the labor market, choice of studying and specializations, as well as decisions about their households and investment in human capital (ILO & UNDP, 2019).

According to the WHO, effectively closing gender gaps and dismantling the structural barriers that are preventing women in the healthcare sector from working in conditions of equity promotes what the organization calls the Triple Gender Dividend (WHO, 2021): i) Better Health, as a consequence of greater empowerment and more opportunities for women to occupy leadership positions, which would result in improved healthcare services. ii) Gender Equality, and iii) Economic Growth, as a consequence of a more efficient system that justly involves more women in the healthcare sector, in turn promoting the fulfillment of the SDGs and universal healthcare coverage. In this sense, addressing the existing inequality faced by women in the healthcare sector in Colombia is not only important in itself, but has the potential to bring wider benefits to society as a whole.

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## 7. ANNEXES

Table 6 Programmes of human talent in health, according to educational level

TYPE OF PROGRAM	CAREER	
AUXILIARY	A01 – HEALTH ADMINISTRATIVE ASSISTANT A02 – NURSING AUXILIARY A03 – ORAL HEALTH AUXILIARY	A04 – PUBLIC HEALTH ASSISTANT A05 – SERVICE AUXILIARY PHARMACEUTICALS A99 – OTHER HEALTH CARE AUXILIARY
PROFESSIONAL TECHNICIAN	TC01 – PROFESSIONAL TECHNICIAN IN PRE-HOSPITAL CARE TC02 – PROFESSIONAL OCCUPATIONAL HEALTH AND SAFETY TECHNICIAN TC04 – PROFESSIONAL TECHNICIAN IN DENTAL MECHANICS	TC07 – PROFESSIONAL TECHNICIAN IN CYTOHISTOLOGY TC08 – ORAL HEALTH PROFESSIONAL TECHNICIAN TC99 – OTHER HEALTH PROFESSIONAL TECHNICIANS
TECNOLOGY	T02 – PREHOSPITAL CARE TECHNOLOGY T03 – CYTOHISTOLOGY TECHNOLOGY T05 – OCCUPATIONAL HEALTH AND SAFETY TECHNOLOGY T09 – TECHNOLOGY IN OPEN-SOURCE MANAGEMENT FOR DIAGNOSTIC AND THERAPEUTIC USE T10 – DENTAL MECHANICS TECHNOLOGY T11 – HEALTH PROMOTION TECHNOLOGY	T12 – RADIOLOGICAL AND RADIOTHERAPY TECHNOLOGY T13 – RADIOLOGY AND DIAGNOSTIC IMAGING T14 – PHARMACY REGISTRY TECHNOLOGY T16 – TECHNOLOGY IN RADIOTHERAPY T99 – OTHER HEALTH TECHNOLOGISTS
UNIVERSITY	P01 - BACTERIOLOGY P02 – MICROBIOLOGY AND BIOANALYSIS P03 - NURSING P04 – PHYSICAL THERAPY P05 – SPEECH THERAPY P06 – INSTRUMENTATION SURGICAL P07 - MEDICINE	P10 - OPTOMETRY P11 - PSYCHOLOGY P12 – OCCUPATIONAL HEALTH AND SAFETY WORK P13 - OCCUPATIONAL P14 – THERAPY RESPIRATORY P16 - GERONTOLOGY P17 – PHARMACEUTICAL CHEMISTRY

TYPE OF PROGRAM	CAREER	
	P08 – NUTRITION AND DIETETICS P09 - DENTISTRY	P99 – OTHER PROFESSIONALS HEALTH
ESPECIALIZATION	D01 – NUCLEAR MEDICINE D02 - PATHOLOGY D03 – RADIOLOGY AND DIAGNOSTIC IMAGING D0301 – BODY IMAGE D0302 – ONCOLOGIC IMAGING D0303 - NEURORADIOLOGY D0304 – INTERVENTIONAL RADIOLOGY D99 – OTHER DIAGNOSTIC SPECIALTY E01 – FAMILY AND COMMUNITY HEALTH E99 – OTHER MULTIDISCIPLINARY SPECIALIZATION E99P01 – OTHER SPECIALIZATION BACTERIOLOGY E99P03 – OTHER NURSING SPECIALIZATION E99P04 – OTHER PHYSIOTHERAPY SPECIALIZATION E99P05 – OTHER SPEECH THERAPY SPECIALIZATION E99P08 – OTHER SPECIALIZATION IN NUTRITION AND DIETETICS E99P09 – OTHER SPECIALIZATION DENTISTRY E99P10 – OTHER SPECIALIZATION OPTOMETRY E99P14 – OTHER SPECIALIZATION RESPIRATORY THERAPY M01 - ALLERGOLOGY M02 - ANESTESIOLOGÍA M0201 – CARDIOVASCULAR ANESTHESIOLOGY	M1504 – NEPHROLOGY PEDIATRIC M1505 - NEONATOLOGY M1506 – PEDIATRIC PULMONOLOGY M1507 – NEUROLOGY PEDIATRIC M1508 – PEDIATRIC ONCOLOGY M1509 – INTENSIVE CARE PEDIATRIC M1510 – PEDIATRIC GASTROENTEROLOGY M1511 – PEDIATRIC RHEUMATOLOGY M1512 – PEDIATRIC ENDOCRINOLOGY M16 - PSYCHIATRY M1601 – LIAISON PSYCHIATRY M1602 – PEDIATRIC PSYCHIATRY M17 – CLINICAL TOXICOLOGY M18 – FORENSIC MEDICINE M19 - RADIOTHERAPY M20 – HOMEOPATHIC MEDICINE MC99 – OTHER CLINICAL SPECIALITY NOT DEFINED Q01 – GENERAL SURGERY Q0101 – CARDIOVASCULAR SURGERY Q0102 – HEAD AND NECK SURGERY

TYPE OF PROGRAM	CAREER
M0202 – PAIN AND PALLIATIVE CARE	Q0103 – BREAST SURGERY AND SOFT TISSUE TUMORS
M03 - DERMATOLOGY	Q0104 – THORACIC SURGERY
M0301 – ONCOLOGICAL DERMATOLOGY	Q0105 –GASTOINTESTINAL SURGERY
M04 – MEDICAL GENETICS	Q0106 – ONCOLOGIC SURGERY
M05 – AEROSPACE MEDICINE	Q0107 - COLOPROCTOLOGY
M06 – EMERGENCY MEDICINE	Q0108 – SURGERY TRANSPLANTS
M07 – SPORT MEDICINE	Q0109 – VASCULAR SURGERY AND ANGIOLOGY
M08 – PAIN MEDICINE AND PALLIATIVE CARE	Q02 – PEDIATRIC SURGERY
M09 – OCCUPATIONAL MEDICINE	Q03 – PLASTIC SURGERY
M10 – AESTHETIC MEDICINE	Q0301 – FACIAL PLASTIC SURGERY
M11 – FAMILY MEDICINE	Q0302 – ONCOLOGICAL PLASTIC SURGERY
M12 – PHYSICAL MEDICINE AND REHABILITATION	Q0303 – HAND PLASTIC SURGERY
M1201 – ONCOLOGY REHABILITATION	Q04 – GYNECOLOGY AND OBSTETRICS
M1202 – PEDRIATRIC REHABILITATION	Q0401 – GYNECOLOGIC ONCOLOGY
M13 – INTERNAL MEDICINE	Q0402 – MATERNAL FETAL
M1301 - CARDIOLOGY	Q0403 – MEDICINE REPRODUCTIVE
M130101 – INTERVENTIONAL CARDIOLOGY AND HEMODYNAMICS	Q05 - NEUROSURGERY
M1302 – INTENSIVE CARE	Q06 - OPHTHALMOLOGY
M1303 – ENDOCRINOLOGY	Q0601 – ONCOLOGICAL OPHTHALMOLOGY
M1304 – INFECTIOUS DISEASES	Q0602 – PEDIATRIC OPHTHALMOLOGY
M1305 - GASTROENTEROLOGY	Q0603 – RETINA AND VITREOUS
M1306 - GERIATRICS	Q07 – ORTHOPEDICS TRAUMATOLOGY
M1307 - HEMATOLOGY	Q0701 – FOOT SURGERY ANKLE
M1308 – HEMATOLOGY AND ONCOLOGY	Q0702 – SPINE SURGERY
M1309 – VASCULAR MEDICINE	Q0703 HIP AND HIP REPLACEMENT SURGERY KNEE

TYPE OF PROGRAM	CAREER
M1310 - NEPHROLOGY	Q0704 – HAND SURGERY
M1311 - PULMONOLOGY	Q0705 – PEDIATRIC ORTHOPEDICS
M1312 - ONCOLOGY	Q0706 – ORTHOPEDICS ONCOLOGICA
M1313 - RHEUMATOLOGY	Q08 - OTORHINOLARYNGOLOGY
M1314 - HEPATOLOGY	Q0801 – LARYNGOLOGY AND SUPERIOR
M14 - NEUROLOGY	Q0802 - OTOLOGY
M1401 - NEUROPHYSIOLOGY	Q09 - UROLOGY
M15 - PEDIATRICS	Q0901 – PEDIATRIC UROLOGY
M1501 – PEDIATRIC CARDIOLOGY	Q0902 – ONCOLOGICAL UROLOGY
M1502 – PEDIATRIC HEMATOLOGY AND ONCOLOGY	Q99 – OTHER SURGICAL SPECIALITY
M1503 – INFECTOLOGY PEDIATRIC	

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Table 7. Regions

REGION	DEPARTAMENT
Bogotá D.	C. Bogotá D.C.-Gotá D.C.
Atlantic Coast	Archipelago of San Andrés, Providencia and Santa Catalina
	La Guajira
	Magdalena
	Atlántico
	Cesar
	Bolívar
	Sucre
Center	Córdoba
	Cundinamarca
	Boyacá
	Santander
	Norte de Santander
Midwest	Antioquia
	Quindío
	Risaralda
	Caldas
Southh West	Nariño
	Cauca
	Valle del Cauca
	Huila
	Tolima
Orinoco, Amazonia and Chocó	Chocó
	Meta
	Casanare
	Arauca
	Vichada
	Vaupés
	Guainía
	Guaviare
	Putumayo
	Caquetá
	Amazonas



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PNUDenColombia



comunicaciones.co@undp.org

Calle 84A #10-50, Piso 3  
+57 (1) 4889000  
Bogotá, Colombia